

BEACON/MORRIS "BM" SERIES GAS FIRED BLOWER UNIT HEATER

BEBS-10

DESCRIPTION

The Beacon/Morris High Efficiency Unit Heater features integral power venting (factory installed) and sealed flue collector for optimum combustion. It minimizes wind effects on the system's efficiency. Electronic spark ignition reduces pilot gas losses, and the power drafter allows for horizontal venting through side walls. It all adds up to higher seasonal efficiencies and lower installation time. Certified by ETL International. Approved for use in Canada.

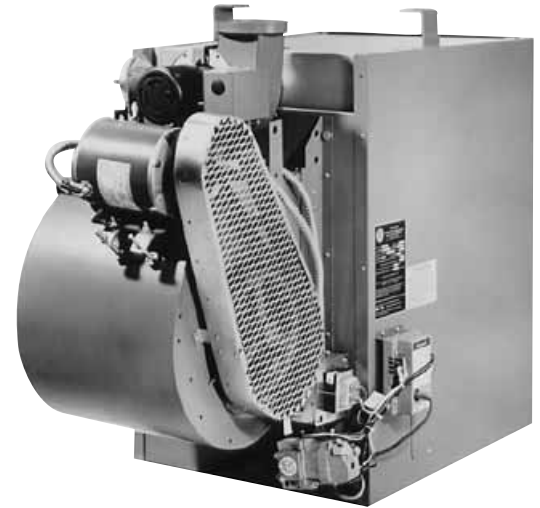


80% THERMAL EFFICIENCY

The design achieves 80% thermal efficiency and annual fuel savings of up to 25% over conventional gravity vented heaters.

STANDARD FEATURES

- Spark Ignited Intermittent Safety Pilot With Electronic Flame Supervision
- Power Venter
- 20-gauge Aluminized Steel Heat Exchanger
- Certified for natural and propane gases.
- Aluminized Steel Burners with Stainless "Burner Shade Port Protector"
- 115 Volt Supply Voltage
- 115 Volt Motors, All Sizes with overload protection
- High Limit Switch
- Burner Air Shutters, All Sizes
- Fan Time Delay-Relay
- Motors and drives Factory mounted.
- Transformer, 115/24 Volt
- Combustion Air Pressure Switch
- Redundant Single Stage Combination Gas Valve
- Bottom Access Panel, All sizes
- Belt Guard
- Horizontal Individually Adjustable Louvers
- Four Point Hanger Suspension
- 20-gauge Steel Cabinet with Gray Enamel Finish
- Duct Discharge flange on high static blower heater can be substituted for horizontal louver at no extra charge.
- Units are factory tested for operation of motor, control and flame.



OPTIONAL EXTRAS

OPT. NO.	DESCRIPTION
—	Stainless Steel Heat Exchangers (409 or 321)
S3	409 Stainless Steel Flue Collectors
S1	409 Stainless Steel Burners
Q6	Vertical Louvers
P6	Summer - Winter Toggle Switch
G3	Low voltage room thermostat with Integral Switch for summer fan operation with the Beacon/Morris logo.
Q2, Q3, Q4	30°, 60° & 90° Downward Discharge Nozzle.
Q1	Y-Splitter Discharge Nozzle.
M8	Duct Flange Assembly



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PROJECT: _____

UNIT TAG: _____

BMEB – PERFORMANCE AND DIMENSIONAL DATA

Capacity (MBH)	100	125	150	175	200	225	250	300	350	400
PERFORMANCE DATA ‡										
Input BTU/Hr (kW)	100,000 (29.3)	125,000 (36.6)	150,000 (43.9)	175,000 (51.2)	200,000 (58.6)	225,000 (65.9)	250,000 (73.2)	300,000 (87.8)	350,000 (102.5)	400,000 (117.1)
Output BTU/Hr (kW)	80,000 (23.4)	100,000 (29.3)	120,000 (35.1)	140,000 (41.0)	160,000 (46.9)	180,000 (52.7)	200,000 (58.6)	240,000 (70.3)	280,000 (82.0)	320,000 (93.7)
Thermal Efficiency (%)	80	80	80	80	80	80	80	80	80	80
Free Air Delivery CFM (cu. m/s)	1,200 (0.566)	1,575 (0.743)	1,975 (0.932)	2,300 (1.086)	2,400 (1.133)	2,600 (1.227)	2,850 (1.345)	3,950 (1.864)	4,600 (2.171)	4,800 (2.266)
Air Temperature Rise °F (°C)	62 (34)	59 (33)	56 (31)	56 (31)	62 (34)	64 (36)	65 (36)	56 (31)	56 (31)	62 (34)
Outlet Velocity FPM (m/s)	880 (4.47)	950 (4.83)	1,030 (5.23)	1,045 (5.31)	965 (4.90)	935 (4.75)	930 (4.72)	1,080 (5.49)	1,090 (5.54)	1,000 (5.08)
Full Load Amps at 115V (O.D.P.)	7.0	8.0	9.1	9.1	13.5	13.5	13.5	13.5	14.9	14.9
MOTOR DATA : Motor HP										
	1/4	1/3	1/2	1/2	3/4	3/4	3/4	3/4	1	1
Motor (kW)	(0.19)	(0.25)	(0.37)	(0.37)	(0.56)	(0.56)	(0.56)	(0.56)	(0.75)	(0.75)
Motor Type (O.D.P.)	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	cap.start	cap.start
RPM	1,725	1,725	1,725	1,725	1,725	1,725	1,725	1,725	1,725	1,725
Amps @ 115V (O.D.P.)	5.1	6.1	7.2	7.2	11.6	11.6	11.6	11.6	13.0	13.0
DIMENSIONAL DATA in. (mm)										
"A" Height to Top of Unit (794)	31-1/4 (794)	31-1/4 (794)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)	36-1/4 (921)
"B" Width of Unit (454)	17-7/8 (454)	20-5/8 (524)	20-5/8 (524)	23-3/8 (594)	26-1/8 (664)	28-7/8 (733)	31-5/8 (803)	37-1/8 (943)	42-5/8 (1083)	48-1/8 (1222)
"C" Height to Top of Hanger (867)	34-1/8 (867)	34-1/8 (867)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)	39-1/8 (994)
"D" Depth to Rear of Housing (1083)	42-5/8 (1083)	44-1/4 (1124)	44-1/4 (1124)	47 (1194)	47 (1194)	51 (1295)	51 (1295)	48-1/4 (1226)	51 (1295)	51 (1295)
"E" Hanging Distance Width (368)	14-1/2 (368)	17-1/4 (438)	17-1/4 (438)	20 (508)	22-3/4 (578)	25-1/2 (648)	28-1/4 (718)	33-3/4 (857)	39-1/4 (997)	44-3/4 (1137)
"F" Discharge Opening Width (391)	15-3/8 (391)	18-1/8 (460)	18-1/8 (460)	20-7/8 (530)	23-5/8 (600)	26-3/8 (670)	29-1/8 (740)	34-5/8 (879)	40-1/8 (1019)	45-5/8 (1159)
"J" to Centerline of Flue (149)	5-7/8 (149)	7-1/4 (184)	7-1/4 (184)	8-5/8 (219)	10 (254)	11-1/4 (286)	12-3/4 (324)	15-1/2 (394)	18-1/4 (464)	21 (533)
"L" Hanger Location (416)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)
"M" Hanging Distance Depth (416)	16-3/8 (416)	16-3/8 (416)	16-3/8 (416)	17-7/8 (454)	17-7/8 (454)	21-7/8 (556)	21-7/8 (556)	21-7/8 (556)	21-7/8 (556)	21-7/8 (556)
Flue Size Dia-in. * (Dia-mm)	4 (102)	4 (102)	4 (102)	4 (102)	5 (127)	5 (127)	5 (127)	6 (152)	6 (152)	6 (152)
Blower Size-in.	9	10	10	12	12	12	12	(2) 10	(2) 12	(2) 12
Gas Inlet-Natural Gas-in.	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Gas Inlet-LP Gas-in.	1/2	1/2	1/2	1/2	1/2			1/2 OR 3/4		
Approx. Shipping Wt. lb. (kg)	262 (119)	279 (127)	314 (142)	336 (152)	363 (165)	408 (185)	427 (194)	471 (214)	561 (254)	594 (269)

‡ Ratings shown are for unit installations at elevations between 0 and 2000 ft. (610m). For unit installations in USA above 2000 ft. (610m), the unit input must be derated 4% for each 1000 ft. (305m) above sea level; refer to local codes, or in absence of local codes, refer to the latest edition of the National Fuel Gas Code, ANSI Standard Z223.1 (N.F.P.A. No. 54).

For installations in Canada, any references to deration at altitudes in excess of 2000 ft. (610m) are to be ignored. At altitudes of 2000 to 4500 ft. (610 to 1372m), the unit must be derated to 90% of the normal altitude rating, and be so marked in accordance with the ETL certification.

LEGEND: SPH = SPLIT PHASE CAP. START = CAPACITOR START O.D.P. = OPEN DRIP PROOF

